

SEMICONDUCTOR DEVICE CAPABLE OF PREVENTING CURRENT FLOW CAUSED BY LATCH-UP AND METHOD OF FORMING THE SAME

ABSTRACT OF THE DISCLOSURE

5 A semiconductor device includes first, second, and third wells. The first well is connected to a pad to which an external pin is connected and includes a first-type diffusion region that receives a well bias voltage. The second well is adjacent to the first well, and includes an insulating region and a second-type diffusion region outside the insulating region. The third well is adjacent to the
10 second well and includes a first-type diffusion region that receives a first voltage.

The insulating region inside the second well along with the first-type well diffusion region of the first well constitute a bipolar junction transistor that cuts off current flowing from the first well to the third well.